

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A power generation apparatus comprising:
 - a fuel cell including an anode;
 - a reforming module, wherein the reforming module is adapted to reform hydrocarbon fuel into hydrogen and other components, and to separate said hydrogen from said other components, the apparatus being arranged so that said hydrogen is fed from the reforming module to the anode of the fuel cell;
 - a recycling arrangement to recycle hydrogen in an outflow stream of the anode of the fuel cell back to the anode; and
 - a controlling arrangement to control the an amount of hydrogen recycled and to tap off, externally of the power generation apparatus for use in a separate process, hydrogen that is not recycled, wherein the controlling arrangement is configured to vary the amount of hydrogen tapped off from zero to all and between zero and all.
- 2-31. (cancelled)
32. (previously presented) The apparatus as claimed in claim 1, wherein the apparatus is arranged such that substantially nothing except hydrogen is fed to the anode of the fuel cell.
33. (previously presented) The apparatus as claimed in claim 1, comprising a removal arrangement to remove water from the outflow stream of the anode of the fuel cell.
34. (previously presented) The apparatus as claimed in claim 1, wherein the reforming module is further adapted to separate carbon dioxide and to output a stream of said carbon dioxide.

35. (previously presented) The apparatus as claimed in claim 1, wherein the reforming module is further adapted to absorb carbon dioxide or to sequester carbon dioxide into a solid.

36. (previously presented) The apparatus as claimed in claim 1, wherein the reforming module comprises means for absorbing the carbon dioxide by a carbonation reaction with a metal oxide or hydroxide to produce a metal carbonate.

37. (previously presented) The apparatus as claimed in claim 1, which also comprises a desorption module adapted to allow the release of carbon dioxide.

38. (previously presented) The apparatus as claimed in claim 1, wherein the reforming module is thermally integrated with the fuel cell.

39. (previously presented) The apparatus as claimed in claim 37, wherein the desorption module is thermally integrated with the fuel cell.

40. (cancelled)

41. (previously presented) The apparatus as claimed in claim 1, wherein the recycling arrangement includes a recycle path connecting an outlet of the fuel cell to an inlet of the fuel cell and the controlling arrangement is fluidly connected in the recycle path between the outlet and the inlet.

42. (previously presented) The apparatus as claimed in claim 41, wherein the controlling arrangement includes a valve.

43. (currently amended) The apparatus as claimed in claim 42, wherein the valve is a three-way valve which receives an inlet flow from the outlet of the fuel cell and is connected to first and second pipes, with the first pipe defining the recycle path extending between the outlet of the fuel cell and the inlet of the fuel cell, and the second pipe directing the hydrogen, which is tapped off and not recycled, to a separate processing unit.

44. (previously presented) The apparatus as claimed in claim 43, further comprising a condenser connected to the three-way valve.

45. (previously presented) The apparatus as claimed in claim 1, wherein the controlling arrangement includes a valve.

46. (previously presented) The apparatus as claimed in claim 45, wherein the valve is a three-way valve.

47. (previously presented) The apparatus as claimed in claim 46, further comprising a condenser connected to the three-way valve.

48. (currently amended) A power generation apparatus comprising:

- a fuel cell including an anode;

- a reforming module, wherein the reforming module is adapted to reform hydrocarbon fuel into hydrogen and other components, and to separate said hydrogen from said other components, the apparatus being arranged so that said hydrogen is fed from the reforming module to the anode of the fuel cell;

- a recycling arrangement to recycle hydrogen in an outflow stream of the anode of the fuel cell back to the anode; and

- a controlling arrangement to control ~~an amount~~ a proportion of hydrogen recycled and to tap off, externally of the power generation apparatus, hydrogen that is not recycled for use in a separate process, wherein the proportion of hydrogen recycled to tapped off can be controlled through the controlling arrangement to include 100:0, 0:100 and at least one ratio there between.

49. (previously presented) The apparatus as claimed in claim 48, wherein the recycling arrangement includes a recycle path connecting an outlet of the fuel cell to an inlet of the fuel cell and the controlling arrangement is fluidly connected in the recycle path between the outlet and the inlet.

50. (previously presented) The apparatus as claimed in claim 49, wherein the controlling arrangement includes a valve.

51. (previously presented) The apparatus as claimed in claim 50, wherein the valve is a three-way valve.

52. (new) The apparatus as claimed in claim 1, wherein the controlling arrangement is configured to vary a proportion of hydrogen recycled to hydrogen tapped off to include 100:0, 0:100 and at least one ratio there between.

53. (new) The apparatus as claimed in claim 52, wherein the controlling arrangement is configured to vary the proportion of hydrogen recycled to hydrogen tapped off to include 100:0, 95:5, 90:10, 75:25, 50:50, 25:75, 10:90, 5:95 and 0:100.

54. (new) The apparatus as claimed in claim 48, wherein the controlling arrangement is configured to vary the proportion of hydrogen recycled to hydrogen tapped off to include 100:0, 95:5, 90:10, 75:25, 50:50, 25:75, 10:90, 5:95 and 0:100.

55. (new) The apparatus as claimed in claim 51, wherein the three-way valve receives an inlet flow from the outlet of the fuel cell and is connected to first and second pipes, with the first pipe defining the recycle path extending between the outlet of the fuel cell and the inlet of the fuel cell, and the second pipe directing the hydrogen, which is tapped off and not recycled, to a separate processing unit.